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Passed March 9th 1827
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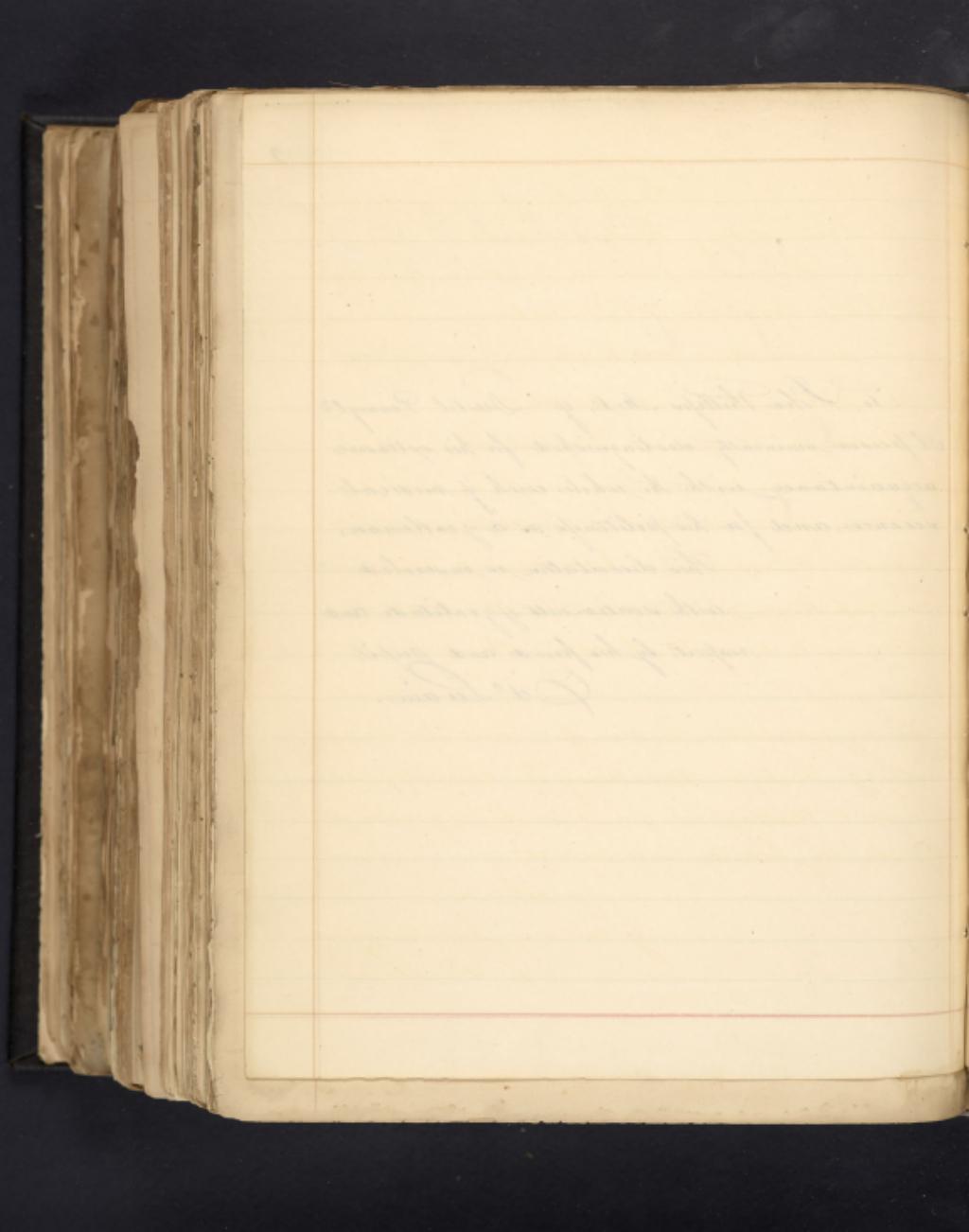
An Inaugural Dissertation
On
Cholera Infantum
by
Edward Swain
Pennsylvania.

all of the land.

all of the

To John Phillips M.D. of Bristol Penury¹
A person eminently distinguished for his extensive
acquaintance with the whole circle of medical
science, and for his politeness as a gentleman.

This dissertation is inscribed
with sentiments of gratitude and
respect by his friend and pupil
D^r Swain.



To the Medical Professors
of the University of Bonn to whom a

Impressed with all the esteem and respect
that a pupil can feel for his teacher conscious
of your unceasing zeal to inspire your pupils
with a taste for study and observation,

Permit me in leaving the school where I have
had the honor to finish my medical education,
to tell you my warmest acknowledgements for
the useful information I have received from your
valuable lectures and believe me sir I shall ever bear
a lively recollection of the pleasure with which I att-
ended you.

So your reputation as men of science I can add
nothing; the high estimation of the University is suffi-
cient to distinguish you as worthy professors, just-
ly meriting honor and respect.

Yours very humble servant
Dr. Storck

* Grizzled and Black. Comp. View

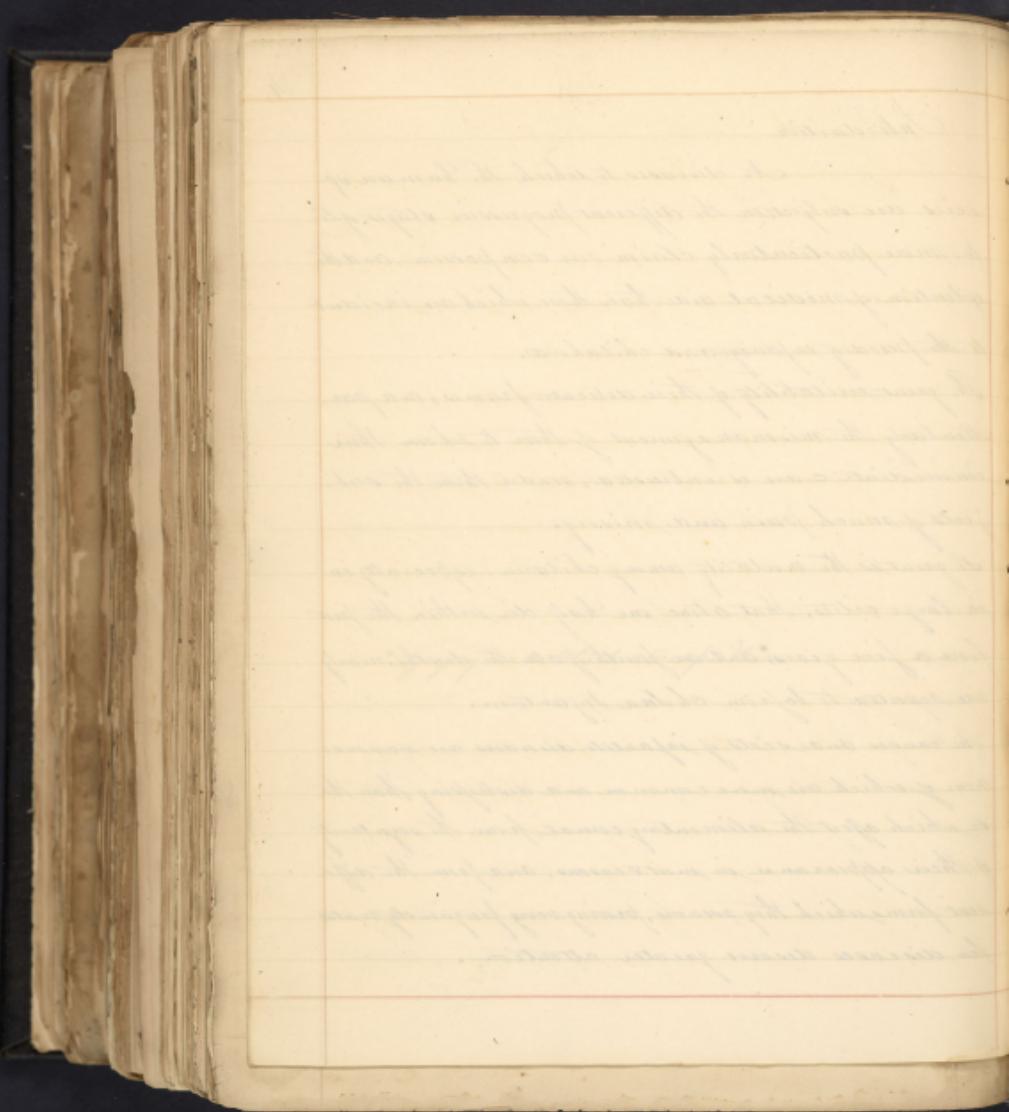
Introduction

The diseases to which the human species are subject, in the different progressive stages of life, more particularly claim our compassion, and the exertion of medical aid than those which are incident to the period of infancy and childhood.

The great mutability of their delicate frames, and particularly the mismanagement of them to whom their immediate care is intrusted, render them the subjects of much pain and misery.

So great is the mortality among children, especially in large cities. That above one half die within the first four or five years; and one fourth of all the deaths nearly are reported to be from *childhood* or *infantum*.

The causes and seats of infantile diseases are various; none of which are more common and distressing than those which affect the alimentary canal, from the singularity of their appearance in most seasons, and from the different forms which they assume, proving very frequently, that a few diseases deserve greater attention.

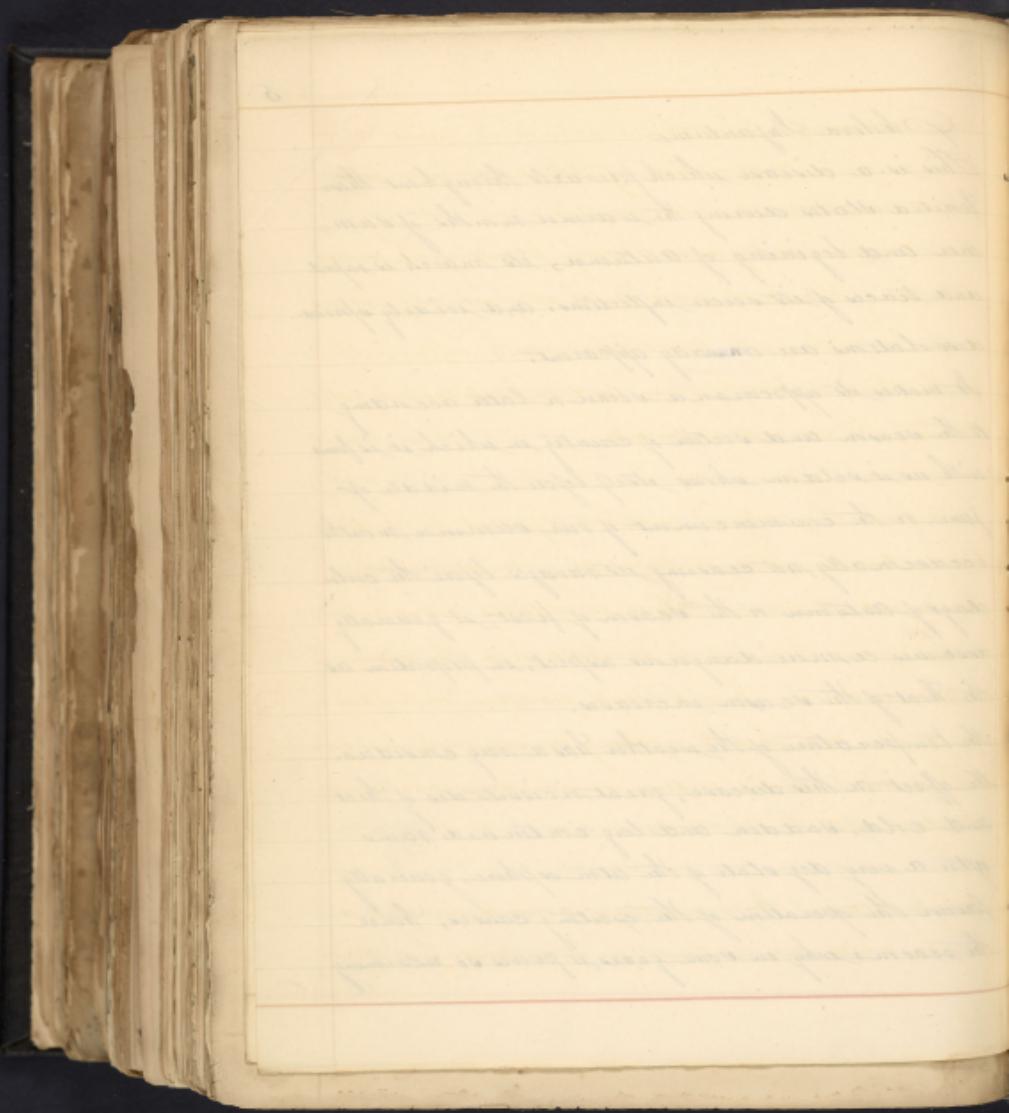


Cholera Infantum

This is a disease which prevails throughout these United States during the warmer months of summer and beginning of autumn, its march is rapid and traces of its severe inflictions, and widely spread desolations are commonly apparent.

It makes its appearance sooner or later according to the season and section of country in which it is found with us, it seldom shows itself before the middle of June, or the commencement of our summer months, occasionally not ceasing its ravages before the cold days of autumn or the season of frost, it generally assumes a more dangerous aspect, in proportion as the heat of the season increases.

The temperature of the weather has a very considerable effect on this disease, great vicissitudes of heat and cold, sudden and long continued rains after a very dry state of the atmosphere, generally favor the operation of the exciting cause, hence the reason why in some years, it proves so alarming



and distressing, whilst in others, from the mild and more uniform temperature of the atmosphere, it is of comparatively rare occurrence.

This disease may arise at any period of the infantile life, though we find it most generally occurs from the fifth to the twelfth month after birth to the third or fourth year, and is particularly fatal during the second summer.

Cholera Infantum does not appear to be a distinct disease from intermitting, and remitting fever, and *Cholera morbus* in adults, but a variety of the same; this may be inferred from the same cause inducing these several disorders, with this difference only, that the exciting cause, with less force will produce morbid action in children who are predisposed to the disease.

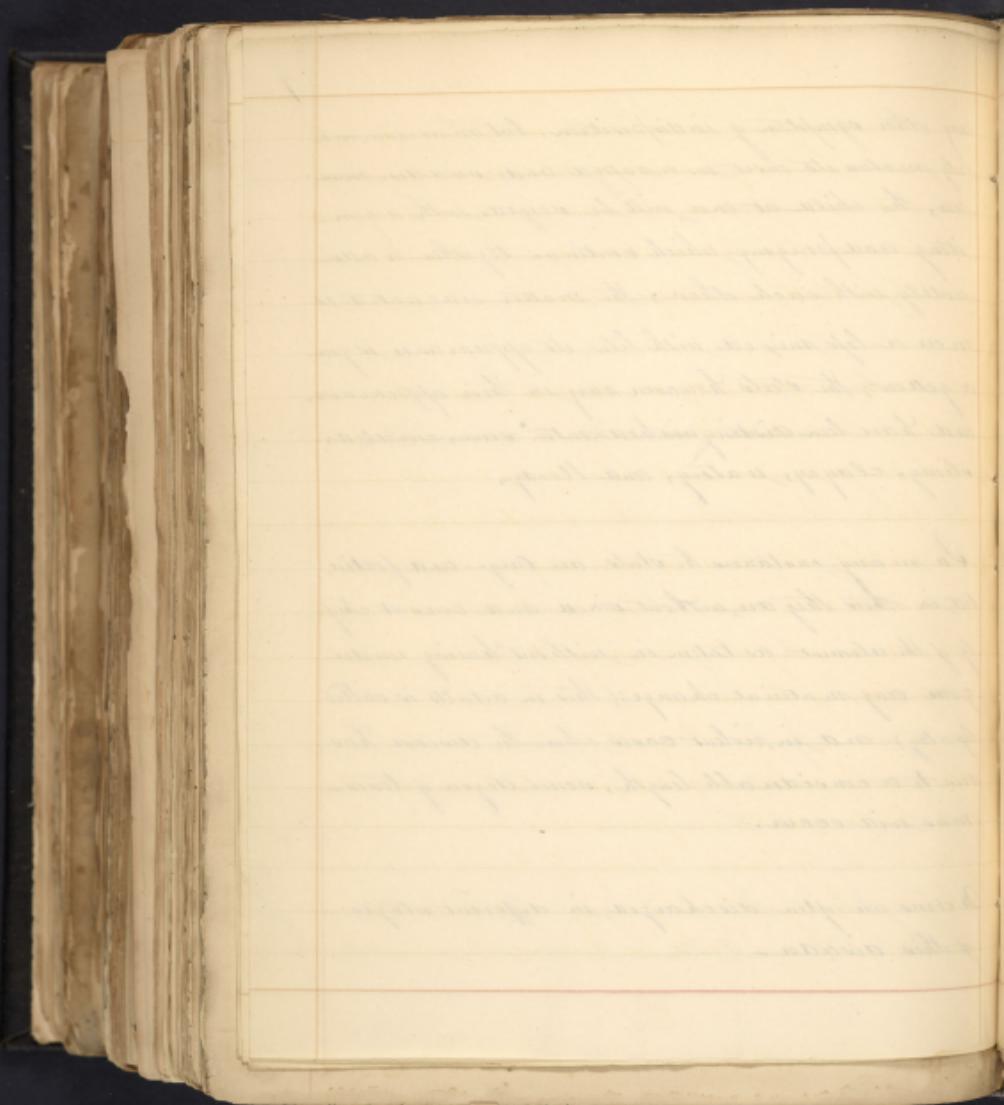
Symptoms. It is sometimes ushered in by a diarrhoea which will continue for several days without

Underwood on the diseases of children.

any other symptom of indisposition, but more commonly makes its onset in a rapid and sudden manner, the child at once will be seized with a vomiting and purging which continue together, and alternate with each other; the matter evacuated is more or less mixed with bile, its appearance is green or yellow; the stools however vary in their appearance and have been distinguished into sour, curdled, slimy, clayey, watery, and bloody.

In many instances the stools are large and soft, but in others they are without粪便 and consist chiefly of the aliment as taken in without having undergone any material change (this in adults is called *leptos*) and in violent cases when the disease has run to a considerable length, some degree of tenesmus will occur.

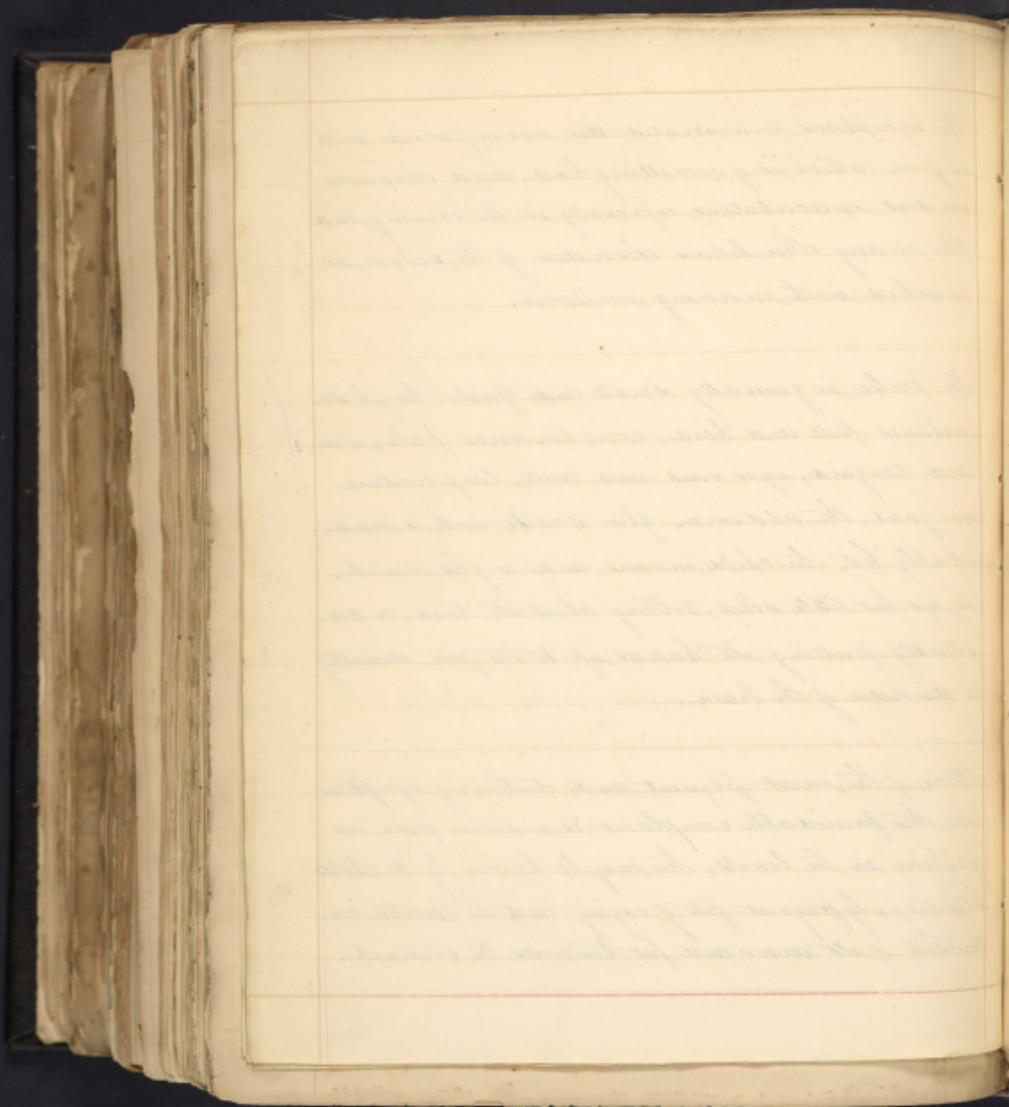
It comes on often discharged in different stages of this disorder.



The symptoms numerous and accompanied with a fever which is of remitting kind, and discourses incident exacerbations especially in the evening, and the many other bilious disorders of the season is marked with many remissions.

The pulse is generally small and quick, though sometimes full and slow, countenance pale, wan and languid, eyes sunk and dull, temperature unequal, the abdomen often swells and is somewhat hot, the child moans and sighs much, enjoys but little sleep, rolling about its bed, or constantly putting its hands up to its face denoting a disorder of the brain.

One of the most frequent and distressing symptoms in this formidable complaint is a severe pain or gripping in the bowels, this may be known by the child starting, by frequent fits of crying and the facile contraction of the anus and fat towards the stomach.



The duration of this disease is various, depending much on the manner in which it comes on, the habit and changes of weather &c.

If the first attack is with violence and left to nature, all the alarming symptoms suddenly increase till the strength of the patient is rapidly diminished, when a fainting comes on, attended with cold sweat, cold extremities, and subcutaneous leadenum, which sometimes puts an end to the unhappy sufferer in the term of an day.

A hot and dry, or hot and moist, atmosphere seldom fails to increase all the violence of the disease, while a cold day very frequently abates its violence, and disposes it to a favourable termination.

It continues in some instances with but few occasional alterations for a six weeks, and even three or four months, before any considerable change takes

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place; when the symptoms grow more numerous and distressing, the body becomes emaciated to such a degree that the bones in some cases almost protrude through the skin; a constant inclination to stool takes place though but little matter can be voided, and that of a watery consistence, or of a green colour.

The eyes become languid, and sink deep within their sockets the features are contracted, and spots appear a sore mouth hiccough, convulsions and a strongly marked Hippocratic countenance generally precede the fatal terminations of this disorder.

Treatment

To this disease like all other bilious disorders of the same season, is attended with an inflammatory sickness in the beginning; the first indications of cure when we are called, early are to remove the exciting cause and lessen the morbid excitement, with these views, the first passage should

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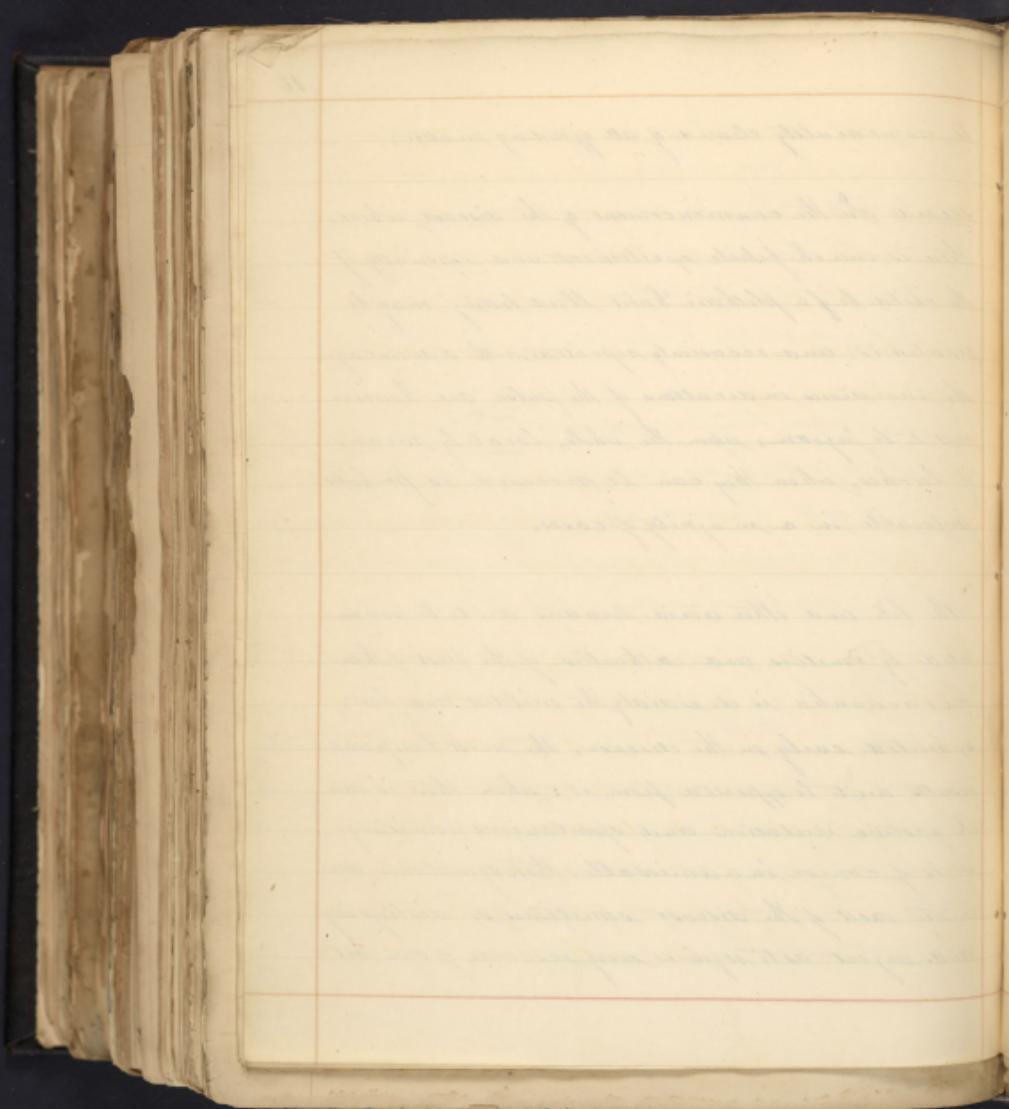
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be immediately cleared of all offending matter;

second. In the commencement of the disease, where there is much febrile excitement and especially if the child be of a plethoric habit blood letting may be resorted to, and occasionally repeated with advantage. The incisive indications of the pulse are however not to be forgotten, upon the whole, local by means of leeches, when they can be procured, is perhaps preferable in a majority of cases.

The bals and other astringent means are to be co-ordinated by emetics and cathartics, of the first of these iscecauanha is decidedly the mildest and best, exhibited early in the disease, the most beneficial results are to be expected from it: when there is much gastric irritation and spontaneous vomiting it is of course inadmissible. These symptoms are in the onset of the disease sometimes so distressing and urgent as to require every resource of our art.



The remedies most usually selected are as follows
 Bigr- lime water and milk. Gravels steeped in li-
 tre and aromatic herbs, the spice plaster. The warm
 bath and cocaine injections. Blister to the arms legs and
 region of the stomach. by taking the determination
 from the alimentary canal, are attended with the
 most salutary effects.

The bowels should be opened by the use of gentle lax-
 atives, such as castor oil with a little laudanum m-
 aqua, or a solution of opium salts.

The system being prepared, we give calomel, in it
 we chiefly confide, as possessing properties eminent
 by adopted to the disease, we do not estimate its
 effects, solely on account of its purgative qualities,
 its specific action on the glandular, and hepatic
 system, its power of exciting morbid excretions
 entitle it to our highest confidence given either a-
 lone or in combination with opium or peach or

* Aye on charasmus.

both in proportion to the nature and urgency of the case it will rarely fail to bring down bilious stools. to a child in its second summer may be given calomel 9*gr.ij.* gum opii *gr.ii.* ippecac. *gr.ii.* every three or four hours.

A late writer of considerable repute advises the administration of calomel in minute doses, such as the $\frac{1}{2}$ of a grain every half hour and its effects in this way are often exceedingly beneficial.

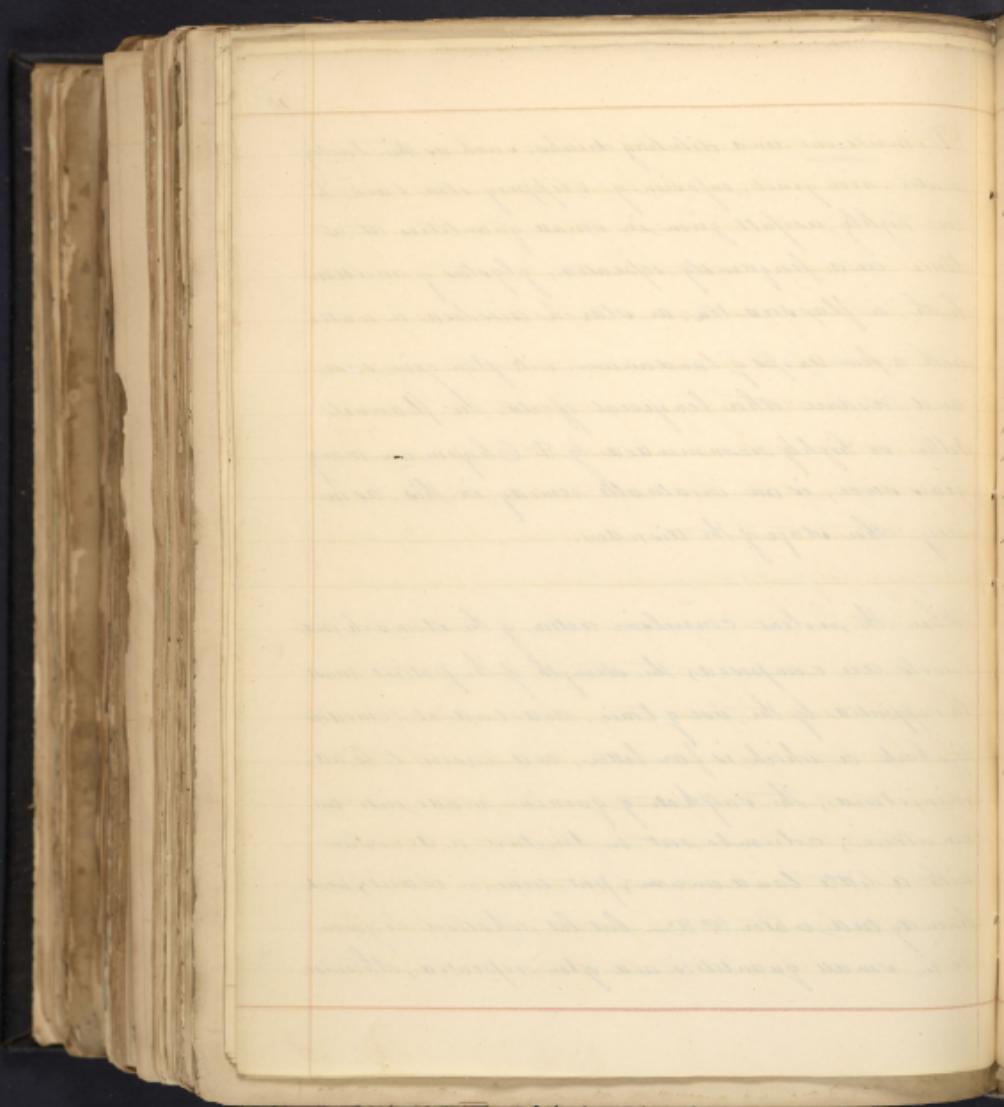
But when the spontaneous discharges have been considerable from the alimentary canal producing a prostration of strength, fableness of pulse, and a coldness of the extremities, we may conclude that the disease has already sufficiently (or too much) reduced the system, and that all further evacuations by artificial means, would be highly impious, because must here be had to remedies to subdue the diarrhoea, and support the strength of the patient viz. purpura cholla with sugar -

* Chapman

laudanum and cinnamon water formed into a
 julep will be found a useful. Rx. Senna. ppt. ℥ij. Ss.
 opii gr XV. sac. alt. ℥j. Ag. Cinnamon ℥ij dose
 a dessert spoonful every 3 or 4 hours, the rest of the alkali
 in the following manner, may sometimes be given
 with a good effect. Rx. cal. tart. ℥j. Ss. opii gr XV. sac.
 alt. ℥j. ag. fontana. ℥ij dose the same as above.
 Rhubarb is also useful here 1/2 Rad. Rhiz. gr I. Galactog.
 ℥ij. Ss. opii gr XV. A. Anis gr I. sac alt. ℥j. Ag. Ion.
 tan ℥ij. dose the same as above, when the stools
 are very frequent. Alum in the dose of one grain or
 less with the 1/2 a dr of a grain of opium is useful
 Rx. Senna, infusion of gall, with laudanum, and co.
 lumbine is useful. The infusion of log wood in the dose
 of a dessert spoonful as recommended by Dr. Physick
 may be used with advantage. The infusion of the
 dew-berry made by pouring one pt. of boiling water on
 one ounce of the berries root, as recommended by Dr.
 Chapman in the dose of a dessert spoonful per se.
 nata- is an invaluable remedy.

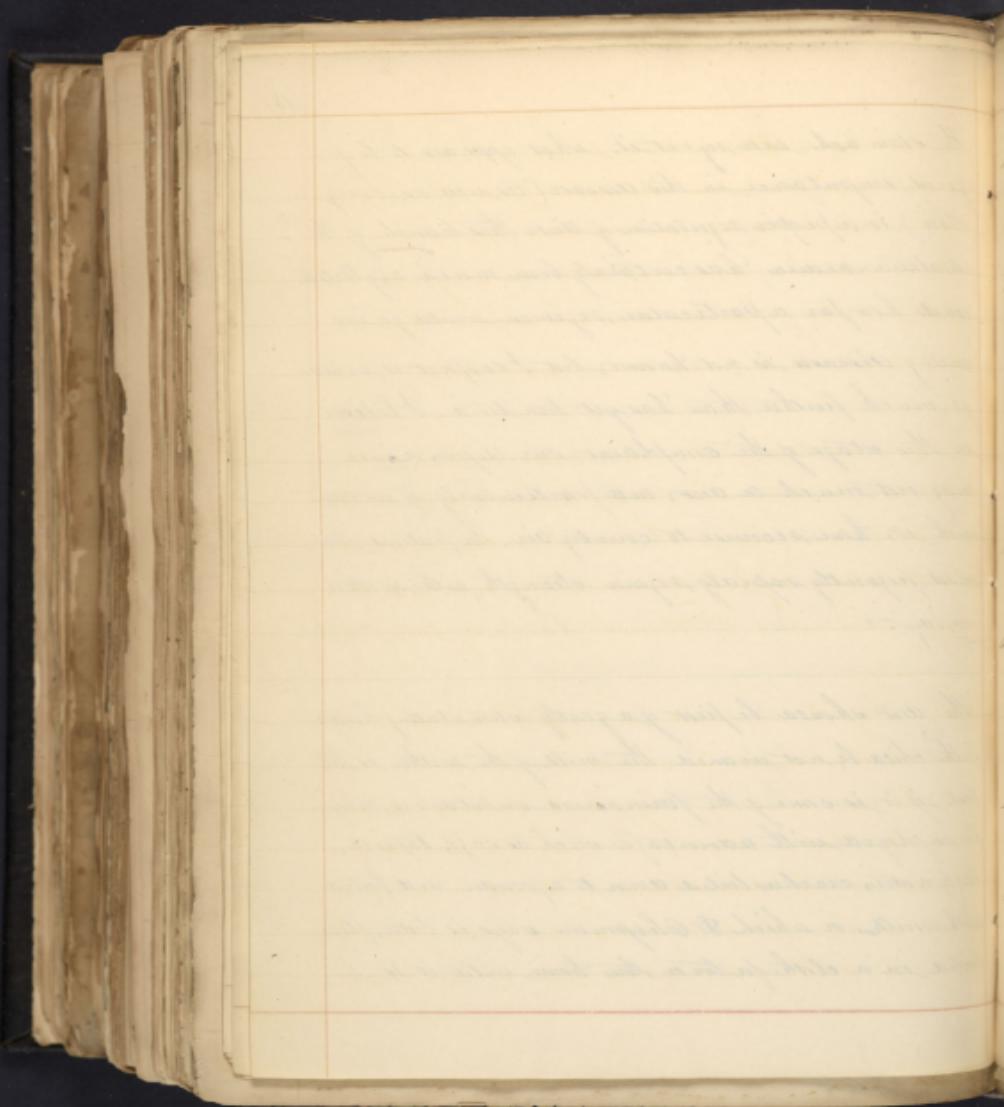
Demulcent and diluting drinks, such as thin barley water, rice gruel, infusion of slippery elm bark 8^{oz} are highly usefull given in small quantities at a time and frequently repeated, glysters of mustard bath, or flax seed tea, or starch dissolved in water with a few drams of laudanum, will often give ease and produce other beneficial effects. The flannel roller so highly recommended by Dr Chapman many years since, is an invaluable remedy in this, as in every other stage of the disorder.

When the violent convulsive action of the stomach and bowels are composed, the strength of the patient must be supported by the use of tonic, and carious remedies viz. bark a which is far better, and easier to be administered, the sulphate of quinine made into an emulsion; columbo root in tincture or decoction with a little laudanum; port wine, or claret; weak brandy and water 8^{oz} 8^{oz} but let whatever be given be in small quantities and often repeated, otherwise



The stomach will reject it, what appears to be of great importance in this disease (as well as every other) is a proper regulation of air. This branch of the *Medicina Veterina* has certainly been much neglected, and how far a particular regimen would be in curing disease is not known; but I suspect it would go much further than has yet been tried. I believe in this stage of the complaint our dependence may rest much on air, and particularly if we can with it, have recourse to country air, the patient will most frequently rapidly regain strength, with no other remedy.

The air should be first of a gently stimulating kind: if the child be not weaned the milk of the mother is the best, if it is some of the farinaceous substances may be employed with advantage such as rago, tapioca, barley water, crackers boiled down to a powder and boiled with milk, or which Dr Chapman says is better, flour boiled in a cloth for two or three hours, until it is —



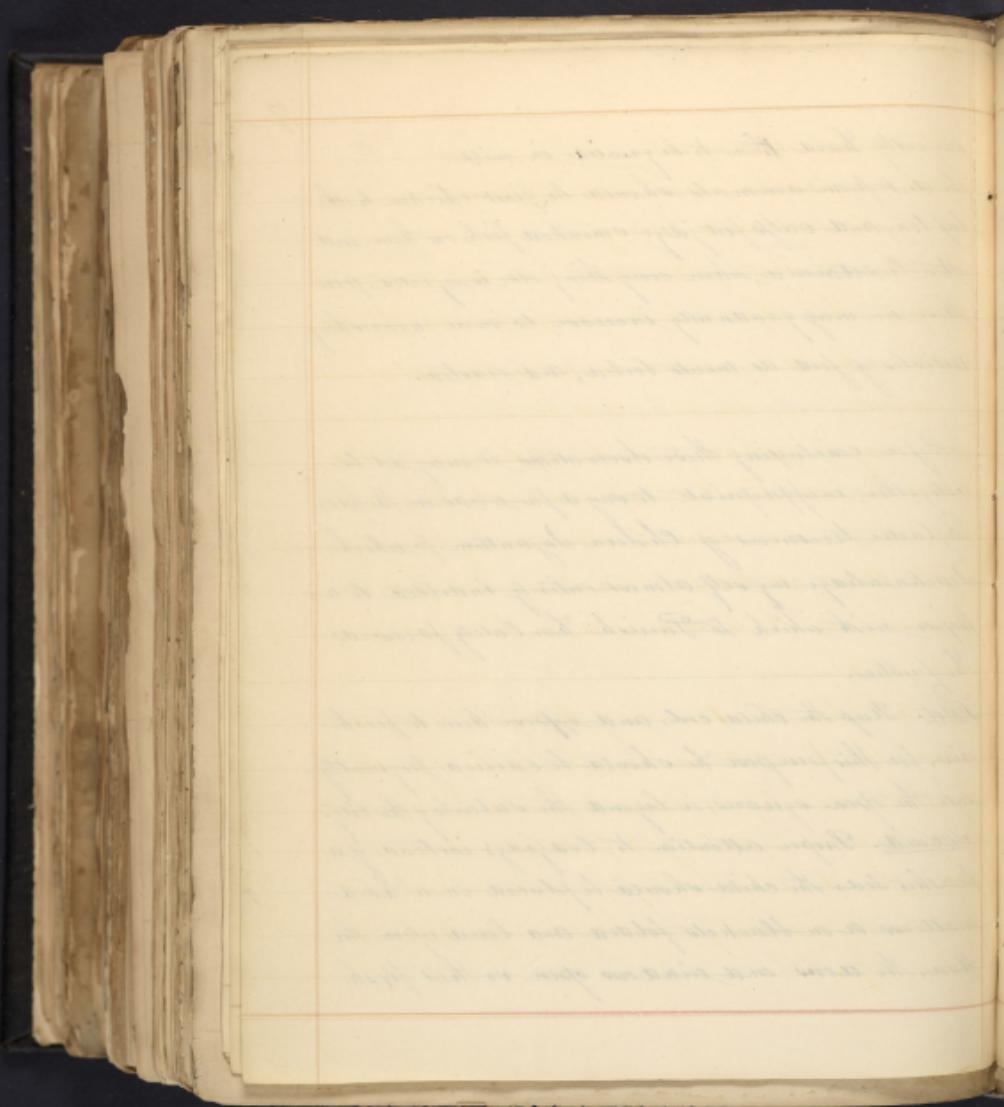
perfectly hard then to be gratified in with.

The diet from animals should be first chicken broths, by tea, and calfs foot jelly; smoked fish or ham will often be retained when every thing else is rejected. From these we may gradually increase to more nourishing articles of food as meats boiled, and roasting.

Before concluding these observations it may not be altogether inappropriate to say a few words on the prophylactic treatment of Cholera Infantum, for which I acknowledge my self almost entirely indebted to a paper with which Dr. Parish has lately favoured the public.

First. Keep the child cool, and expose him to fresh air, for this purpose he should be carried frequently into the open squares, or beyond the outskirts of the city.

Second. Proper attention to lodgings instead of a feather bed, the child should be placed on a hard mattress or on blankets folded and laid upon the floor, the doors and windows open, so that fresh



air may be freely admitted.

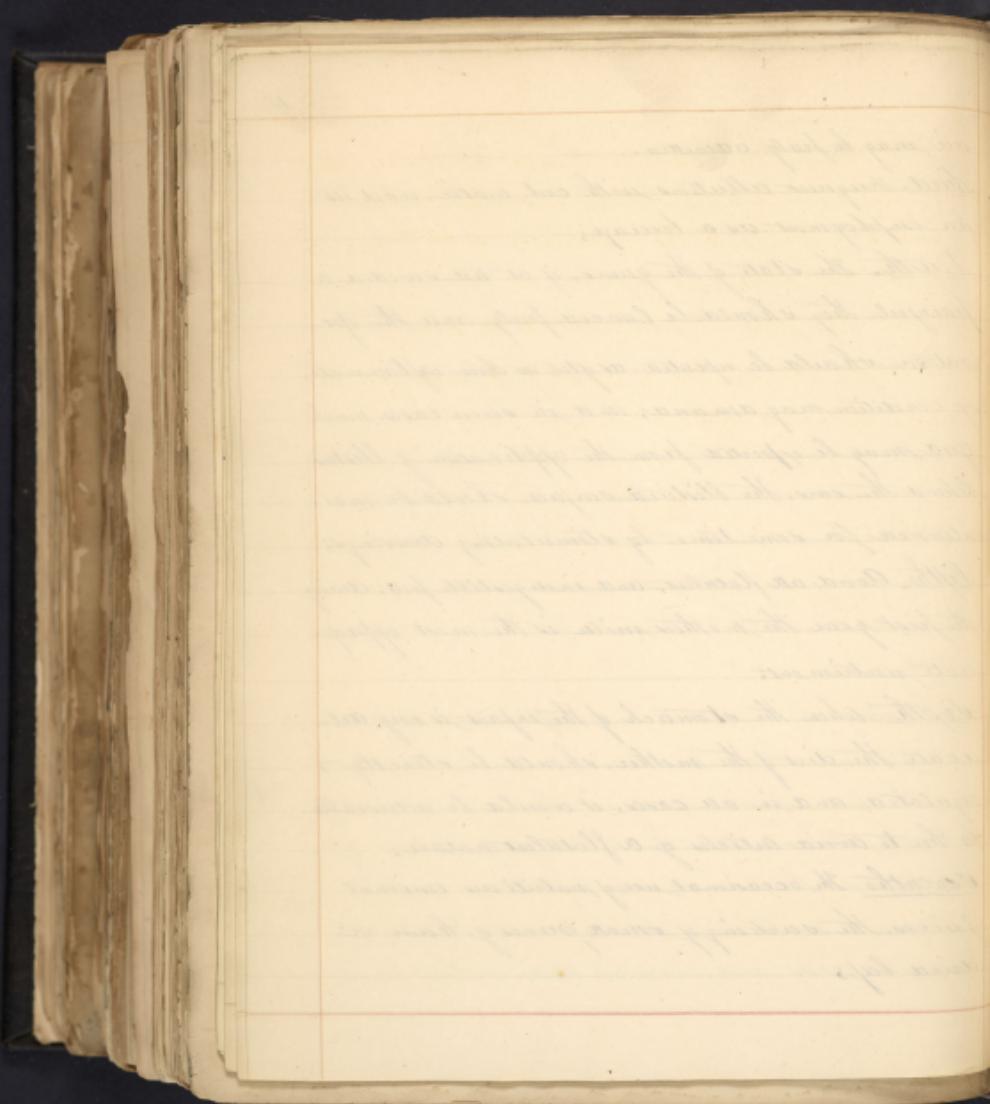
Third. Frequent applications with cold water, and its frequent employment as a fomentation;

Fourth. The state of the gums, if at all swollen or painful. They should be cleaned freely, and the operation should be repeated as often as their inflammatory condition may demands; and in severe cases, much good may be expected from the application of blisters behind the ears. The blistreous surface should be maintained for some time by stimulating dressings;

Fifth. Avoid all flatulent, and indigestible foods during the first year the mother's milk is the most appropriate nutriment.

Sixth. When the stomach of the infant is very delicate the diet of the mother, should be strictly regulated and in all cases, it would be advisable for her to avoid articles of a flatulent nature;

Seventh. The occasional use of nutritious animal juices. The sucking of small pieces of Ham or dried beef;



Eighth. Aromaticics should be used habitually during the summer, in those cases where there is reason to apprehend the occurrence of cholera;

Ninth. The cold bath daily;

Tenth. The flannel roller next to the skin;

Eleventh. Always let animal food enter into the diet of the child after weaning..

Finis

Virginia

On

Cholera Infusion

1896

